

APPLICANT: Mark G. Wheeler
SERIAL NO: Division of 10/047,644 ART UNIT: 3712
FILED: April 13, 2004
FOR: COMPOUND ARCHERY BOW CONSTRUCTION AND METHODS
OF MAKING AND OPERATING THE BOW

Commissioner for Patents
BOX NON-FEE AMENDMENT
Alexandria, Virginia

April 13, 2004

S i r:

PRELIMINARY AMENDMENT

Prior to the first action, please amend the application as follows:

Replace the paragraph bridging pages 13 and 14, beginning at page 13, line 13 as follows:

-- The base cam/power cam assembly generally designated 58 is used at the lower end of the bow and a like base cam/power cam assembly is used at the upper end of the bow. In both instances, the base cam/power cam assembly includes the partially elliptical base cam 59 having a pulley track 59a for reception of the draw cable 15 and a power cam 60 having a pulley track 60a for reception of one of the cables 54 or 56. The upper eccentric mounts the cable 54, the terminal lower end of the cable 54a attaching to a post 61

CERTIFICATION 37 C.F.R. 1.8a and 1.10
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projecting laterally from the base cam 59, as shown particularly in Figure 15. The upper base cam/power cam assembly mounts the terminal end of the cable 15 on its post 62 projecting laterally from base cam 59. The lower end base cam/power cam assembly 59 mounts the cable 56 on its attachment projection 61 and the cable 56 has a yoke connection to both ends of the upper axle pin 18. --

Replace the paragraph bridging pages 14 and 15, beginning on page 14, line 3 as follows:

-- In Figures 15-17, the power cam 60 is shown as including an end 60y abutting a post 60b on base cam 59 and an end 60c which embraces a tubular post 60d on base cam 59 which is journaled on the pulley pin 18. As previously, the base cam 59 and power cam 60 rotate in unison on the pin 18. The upper terminal end 15a of draw cable 15 has a yoke connection 15a to a post 62 fixed on the opposite face of the base cam 59 and the lower terminal end has a similar connection to the base cam 59 of the lower eccentric assembly 58. Both the base cam 59 and the power cam 60 are fixed to one another to move eccentrically about the pivot post 18 at the upper end of the bow, or 19 at the lower end of the bow. Where previously the base cam 59 and the power cam 60 have been side by side or adjacent to one another, they now are separated by a shoulder or axial projection 63 fixed on the base cam pulley 59. This projection 63 which extends clockwise from y to z substantially around power cam 60 in Figure 16 reduces twisting forces and assures that the base cam/power cam assemblies will lie in vertical alignment. The projection 63 is not necessarily clockwise continuous and may be

sectionalized. Generally speaking, the axial projection of the shoulders 63 will be in the neighborhood of .5 to 1.25 inches around a substantive portion of the extent of the power cam 60. In the lower part of the range, one of the shoulders 63 on the upper and lower eccentric pulleys will normally be at least sufficiently different in projection extent to best maintain cable separation. In the right hand bow depicted the projection 63 at the lower end of the bow will be the longer projection. In a left hander's bow, this will be reversed. When a sufficiently long shoulder projection in the neighborhood of .75 to 1.25 inches is provided, the cable guard rod r shown in Figure 1 can be eliminated because the projections 63 on the eccentric pulley assemblies 58 hold the cables 56 and 54 sufficiently apart so that they do not touch one another or imperil the arrow feathers when the arrow is released. In the embodiment where an idler pulley is used in place of the upper eccentric, a hub part, of selected axial projection inwardly, may be used to locate the idler pulley track in vertical alignment with the lower eccentric base cam track. --